

REMARKS

The Office Action dated September 11, 2007, has been received and carefully noted. The above amendments to the specification and claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-15 are currently pending in the application, of which claims 1, 9, 11-13, and 15 are independent claims. Claims 1, 9, 11-13, and 15 have been amended to more particularly point out and distinctly claim the invention, and claims 16-20 have been cancelled without prejudice or disclaimer. No new matter has been added. Entry of the amendments is respectfully requested on the basis of the Request for Continued Examination (RCE) enclosed herewith. Claims 1-20 are respectfully submitted for consideration.

At items 2-4 of the Office Action, claims 1-7 and 9-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2001/0010690 of Shen ("Shen") in view of U.S. Patent Application Publication No. 2002/0083198 of Kim et al. ("Kim"). The Office Action took the position that Shen discloses some of the features of the independent claims, but cited Kim to remedy certain deficiencies of Shen, such as, with respect to claim 1, "conditionally converting at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain

name when the Internet domain name fulfills a predetermined condition.” Applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-8 and 16, is directed to a method for Internet domain name service provisioning including receiving data to be supplied to database operations, the data including at least one Internet domain name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The method also includes conditionally converting at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name are combined to form a single label, wherein the conditionally converting includes converting the Internet domain name when the Internet domain name fulfills a predetermined condition. The method further includes supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format.

Claim 9, upon which claims 10 and 17 depend, is directed to a system for Internet domain name service provisioning including first means for receiving data to be supplied to database operations, the data including at least one Internet domain name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The system also includes second

means for conditionally converting at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name are combined to form a single label, wherein the second means is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition. The system further includes third means for supplying the data to database operations, the supplied data including at least one Internet domain name in the second format.

Claim 11, upon which claim 18 depends, is directed to a name server for Internet domain name service provisioning including a first interface configured to receive data to be supplied to database operations, the data including at least one Internet domain name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The name server also includes a modification module, operably connected to the first interface, configured to conditionally convert at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name form a single label, wherein the modification module is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition. The name server further includes a second interface, operably connected to the modification module, configured to supply the data to database

operations, the supplied data including at least one Internet domain name in the second format.

Claim 12 is directed to a computer program product, for Internet domain name service provisioning, embodied on a computer readable medium. The product includes computer readable code configured to cause a computer to substantially perform receiving data to be supplied to database operations, the data including at least one Internet domain name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The product also includes computer readable code configured to cause a computer to substantially perform conditionally converting at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name are combined to form a single label, wherein the conditionally converting including converting the Internet domain name when the Internet domain name fulfills a predetermined condition. The product further includes computer readable code configured to cause a computer to substantially perform supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format.

Claim 13, upon which claims 14 and 19 depend, is directed to a system for Internet domain name service provisioning including a receiver unit configured to receive data to be supplied to database operations, the data including at least one Internet domain

name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The system also includes a conversion unit configured to convert at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name are combined to form a single label, wherein the conversion unit is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition. The system further includes a supply unit configured to supply the data to database operations, the supplied data including at least one Internet domain name in the second format.

Claim 15, upon which claim 20 depends, is directed to a name server for Internet domain name service provisioning including first interface means for receiving data to be supplied to database operations, the data including at least one Internet domain name including a plurality of successive labels separated by dots, the at least one Internet domain name being in a first format, wherein the at least one Internet domain name includes at least one hostname and at least one top-level domain name. The name server also includes modification means, operably connected to the first interface means, for conditionally converting at least one of the at least one Internet domain name into a second format in which at least two successive labels of the at least one of the at least one Internet domain name form a single label, wherein the modification means is configured to conditionally convert the Internet domain name when the Internet domain name fulfills

a predetermined condition. The name server further includes second interface means, operably connected to the modification means, for supplying the data to database operations, the supplied data including at least one Internet domain name in the second format.

Applicants respectfully submit that the combination of Shen and Kim fails to disclose or suggest all of the elements of any of the presently pending claims.

Shen generally relates to a method, service switching point, service control point, internet gateway, program module, and internet terminal for establishing a connection between a telephone-network terminal and an internet terminal. More particularly, Shen describes an Intelligent Network (IN) based method for establishing a connection between a telephone and an Internet terminal.

In Shen, the connection is established through a service switching point (SSP), which sends, upon receiving a connection set-up request including the subscription number of the Internet terminal, a service request to a service control point (SCP) that determined the Internet address assigned to the subscriber number and returns the Internet address to the SSP, which then continues the establishment of the connection by sending the Internet address to an Internet gateway that sets up the connection through the Internet.

The underlying problem that Shen is attempting to solve is that the establishment of a VoIP connection can be troublesome from the point of view of a subscriber, as can be seen from paragraph [0004] of Shen. To try to mitigate this problem, Shen uses an

Intelligent Network (IN) to resolve the Internet address based on the subscriber number, whereby the subscriber can enter only the subscriber number of the called Internet terminal.

Claim 1 recites, in part, “receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format.” Shen fails to disclose or suggest at least this feature of claim 1.

The Office Action cited paragraph [0031] of Shen as disclosing this feature. The detailed rejection does not explain this alleged correspondence. In the “Response to Arguments” section, however, the Office Action explained that Internet protocol address “149.111.111.111” is being correlated to the claimed data. Applicants respectfully disagree with the Office Action’s position.

Paragraph [0031] refers to a reply message that is sent from the SCP to the SSP. In Shen, none of the network elements receives data to be supplied to database operations, the data including a plurality of successive labels separated by dots. In the Shen system, the SCP receives the above-mentioned service request including the subscriber number. The SSP in turn receives from the SCP a message including the Internet address, but this data is not supplied to database operations. Instead, the SSP sends the Internet address to the Internet gateway.

In other words, the subscriber number is entered at step S21, as discussed in paragraph [0026]. Then, subsequently at step S25, the service control point SCP

determines an Internet address that corresponds to the subscriber number, as discussed in paragraph [0027]. Finally, at paragraph [0031], Shen's SCP drops the dots from the Internet address in order to minimize data transfer (*i.e.* to compress the data) when sending the address to the service switching point SSP, and the SSP does the reverse (*i.e.* decompresses the data), once the data is received.

Thus, the SSP receives that data that is not dot-separated, and adds dots. Furthermore, the SCP determines an Internet address that is dot-separated, but the data is not "data to be supplied to database operations," nor does the data include "at least one Internet domain name," as recited in claim 1, it is simply an Internet Protocol (IP) address. It's also worth noting that the IP address is not what Shen receives, since Shen receives a call request including a subscriber number. Accordingly, Shen cannot possibly disclose or suggest "receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format," as recited in claim 1.

In the Response to Arguments section, the Office Action argued that the SCP sends the shortened IP address to the SSP, and that consequently the data is both "dot-separated" and "supplied to database operations." As noted above, however, this assertion is incorrect.

The Office Action's rationale is that because the SSP sets up a link based on information received from the SCP, "the address is supplied to 'database operations.'"

This assertion does not have any ground. Setting up a link is not a “database operation,” so the conclusion is not justified by the factual assertions that precede it. In other words, the Office Action’s conclusion is a *non sequitur*.

Additionally, in the Response to Arguments section, the Office Action argued that because IP addresses can identify local hosts, that a local host is a domain, and that the IP address is a name. The Office Action concluded that therefore IP addresses are domain names. This rationale is flawed.

The flaw in the Office Action’s reasoning is that an IP address is not a domain name as that term is used in the art of domain name services. Indeed, the fact that “IP address” and “domain name” are not equivalent is the reason that DNS servers were implemented: namely to permit the use of names rather than addresses. Although any other interpretation of “domain names” would have been clearly unreasonable in light of the specification, the claims now specify that the term “domain name” should be understood as it would be in domain name services.

The Office Action stated that the phrase “Internet domain name” appears nowhere in Applicant’s specification. Even assuming this were true, such a fact is entirely irrelevant to the issues at hand. Accordingly, the Office Action’s statement does not support the rejection.

The Office Action made an argument asserting that an E.164 format telephone number is an “Internet domain name.” This argument is plainly contrary to the ordinary meaning of the term “Internet domain name” in the art. Nevertheless, although such an

interpretation would have been clearly unreasonable in light of the specification, the claims now specify that the term “domain name” should be understood as it would be in domain name services. Therefore, the Office Action’s argument in support of the rejection is moot at best, and the rejection should be withdrawn.

The Office Action asserted that “Kim et al. uses dashes in place of dots.” This is simply not true. Kim uses dashes, but not in place of dots. Kim uses dashes because dashes are conventionally used in representing E.164 format telephone numbers. In any event, since neither IP addresses nor E.164 format telephone numbers could possibly correspond to the claimed “Internet domain name,” the Office Action’s argument is at best moot.

The Office Action also argued that the Office Action’s conflation of E.164 number and IP address for the claimed “Internet domain name” is “not a matter of confusion, but rather whether the references teach the claimed subject matter.” The Office Action asserted that Kim describes a domain name for use in establishing a connection to the Internet and therefore teaches an “Internet domain name” as recited in the claims. However, as noted above, an E.164 is not an Internet domain name, as that term would be understood by one of ordinary skill in the art, in view of the specification, and in view of the context currently provided in the claims.

The Office Action also argued that because various numbers in the telephone number are “identifiers of domains” and because the number is used to look up an IP address through a DNS that, therefore, the telephone number is an Internet domain name.

Regardless of the lack of merit of such an argument, the term “Internet domain name,” as that term would be understood by one of ordinary skill in the art, in view of the specification, and in view of the context currently provided in the claims, clearly does not encompass E.164 telephone numbers.

The Office Action did not agree with the above-identified deficiency of Shen, but did not admit that Shen fails to disclose the remaining features of claim 1. As such, Shen fails to disclose or suggest any of the elements of claim 1. The Office Action cited Kim to address the other features of claim 1, but implicitly acknowledged that Kim fails to disclose or suggest “receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format,” as recited in claim 1. Accordingly, the combination of Shen and Kim do not disclose or suggest at least this feature of claim 1.

Kim generally relates to a method of automatically generating an IPv6 address using an E.164 telephone number and of looking up an IP address assigned to an E.164 telephone number. As Kim explains at paragraph 0008, Kim aims to provide a method of automatically generating an IPv6 address using the telephone number of the E.164 format allocated to the telephone terminal in an IPv6-based next-generation Internet communication environment.

Claim 1 recites, “conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least

one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition.” The Office Action admitted that Shen fails to disclose this feature, and Kim also fails to disclose this feature; the combination of Shen and Kim consequently also fails to disclose or suggest this feature of claim 1.

The Office Action pointed to paragraphs [0034] to [0035] of Kim as disclosing these features. Paragraphs [0034] and [0035], however, disclose that an identifier for displaying a name address is represented as “#”. Thus, a name address for a telephone number can be expressed as, for example, “#82-2-123-4567”. In other words, the pound sign followed by the complete telephone number including the area code is referred to as the “name address.” However, this is not an “Internet domain name comprising a plurality of successive labels separated by dots,” and consequently cannot be “said at least one Internet domain name” as provided in the feature, “conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition,” which is recited in claim 1.

Accordingly, Kim fails to remedy Shen's admitted deficiencies with respect to at least this feature of claim 1, and the combination of Kim and Shen fails to disclose or suggest this feature.

There was no response to the failure of Kim to disclose or suggest "conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition," which is recited in claim 1. Thus, the Office Action was not fully responsive. In any event, this reason is simply a further reason why the rejection should be withdrawn.

Furthermore, if the rejection is maintained, it is again respectfully requested that the Office Action recognize the difference between an Internet domain name and an Internet address, as those terms are used by one of ordinary skill in the art in the context of Domain Name Service (DNS). It is respectfully submitted that one of ordinary skill in the art would recognize that a DNS server typically receives a name address (with one example being an Internet domain name address) and provides a corresponding Internet address. If the Examiner disagrees, it is respectfully requested that the Examiner clearly state the basis for disagreeing about this fundamental issue of DNS technology and nomenclature.

The Office Action failed to agree or disagree in the “response to arguments” section, but simply argued that Kim discloses an Internet domain name address. This comment is not fully responsive, because it leaves open the issue raised, namely the fact that an IP address is not an Internet domain name, and that consequently the disclosure in Shen is not germane.

Furthermore, Applicants note that Kim explicitly distinguishes between “domain name address” and “telephone number of E.164 format” in paragraph [0033], lines 4-5 of that paragraph. A “domain name address,” according to Kim can be handled by a conventional DNS protocol mechanism, but Kim’s invention allegedly is needed to accept the E.164 format telephone number as an input, in the last two sentences of that same paragraph. Kim also explicitly distinguishes between those data items (*i.e.* the “domain name address” and the “telephone number of E.164 format”, which are input to the DNS server and the output of the DNS server, which is an Internet Protocol (IP) address, at lines 5-7 of the same paragraph. Accordingly, one of ordinary skill in the art, reading Kim, would not confuse “telephone number of E.164 format” with the claimed “Internet domain name” nor would one of ordinary skill in the art, reading Kim, confuse the claimed “Internet domain name” with an IP address.

Thus, if the rejection is to be maintained, it is respectfully requested that the Examiner provide evidence sufficient to outweigh the evidence provided by paragraph [0033], which explicitly distinguishes a domain name from either a “telephone number of E.164 format” or an “IP address.” If there is no such evidence available, it is respectfully

requested that the rejection be withdrawn, because the rejection cannot be based on the mere assertion of the Examiner, but must be supported by evidence.

This same request was previously made, but the Office Action was non-responsive to the request. Accordingly, it should be presumed that any such counter-evidence does not outweigh Kim's own testimony on the matter, and that it is simply the Office Action's assertion versus the evidence of record, specifically the evidence of the cited reference Kim. Under such circumstances, the rejection is clearly improper and should be withdrawn.

In summary, because the combination of Shen and Kim fails to disclose or suggest all of the features of claim 1, it is respectfully submitted that the rejection does not state a *prima facie* case of obviousness, and it is respectfully requested that the rejection be withdrawn.

Independent claims 9, 11-13, and 15 each have their own scope, but each recite at least some features similar to those discussed above with respect to claim 1. Accordingly, it is respectfully requested that the rejections of claims 9, 11-13, and 15 be withdrawn for similar reasons to those set forth above.

Claims 2-7 and 10, and 14 depend respectively from, and further limit, claims 1, 9, 11, 13, and 15. Thus, claims 2-7 and 10, and 14 recite subject matter that is neither disclosed nor suggested by the combination of Shen and Kim. Withdrawal of the rejections of claims 2-7 and 10, and 14 is correspondingly requested.

With particular regard to claims 5-7, the Office Action continues the argument that the number of labels is a “size.” The number of labels in a domain name is not a size of the domain name. If a future Office Action maintains this argument, evidence (*i.e.* more than mere assertion by the Examiner) should be used to support this rejection, because obviousness can only be established by evidence not mere assertion.

The Office Action apparently attempted to respond to Applicants’ observation that the Office Action has not provided evidence, by asserting that Applicants have not provided counter evidence. Of course, the burden is on the Examiner, not on Applicants to present evidence. Only if the Examiner provides a *prima facie* rejection does it become incumbent on Applicants to rebut such a rejection. In the present rejection, it is clear that the Office Action has no evidence and is merely relying on repeated assertions.

The Office Action stated that the question “How big is that domain name address?” could be answered with “four labels.” That certainly is no ordinary way of speaking about domain names or “domain name addresses,” and the Office Action provides no evidence to support the notion that it is an ordinary way of speaking about “domain name address[es]” or domain names.

Next, the Office Action asserted that “size” is also indicative of the size of memory taken up. However, three very long labels could take up more memory than 50 very short labels. Thus, number of labels does not correspond to size in terms of memory allocation.

The Office Action also notes that Kim mentions a size for decimal numbers (4 bits). However, such a “size” is not what it is alleged is being changed. The claims are not directed to changing the size of representation for decimal numbers (such as by providing an 8 bit representation of the numbers). Accordingly, the Office Action’s observation is not germane to the issue at hand.

The Office Action also argued that “One of ordinary skill in the art would recognize that it would be obvious” This is not the correct legal standard. The correct legal standard is whether one of ordinary skill in the art would have had a reason to make the proposed combination, not whether one of ordinary skill in the art would have “recognize[d] that it would have been obvious.”

The Office Action continued by asserting (in essence) that it would have been “obvious to simply change the conditional number of labels such that only addresses with at least three labels are converted.” However, there is no reason provided in the Office Action why addresses with only two labels should not be converted. Accordingly, it would be counter-intuitive to set up exclusionary conditions without a reason, as this would appear to impair the operation of the device. Thus, the rejection lacks a reasoned basis, and should be withdrawn.

Furthermore, even assuming that somehow the Office Action could provide evidentiary support for the assertion that the counting number of labels is a size, Applicants note that identifying that a size has changed does not end the inquiry as to whether the claim is obvious.

A difference in size is not automatically obvious. The CCPA (the Federal Circuit's predecessor court), in *In re Ehrreich*, 200 USPQ 504 (CCPA 1979) found that the difference in the size of the particles was non-obvious over the cited references. *See, In re Ehrreich*, at 510 (indicating that the "combination ... would not have rendered obvious the particle size limitation ..."). Thus, there is no *per se* rule that limitations relating to changes in size are obvious.

Among the many arguments that the Office Action simply failed to respond to was the argument above, noting that there is no *per se* rule that that limitations relating to changes in size are obvious. Thus, it should be taken as admitted that the Office Action was unable to provide any rationale for applying the rule to the facts in issue.

Furthermore, as Applicants have noted, the case law cited by the Examiner is directed to changes in physical size (*i.e.* scaling), which are non-analogous to "size" changes in what the Examiner has called the field of "string manipulation for use with database operations." Accordingly, for this additional reason, the legal basis of the rejection is traversed, and withdrawal of the rejection is respectfully requested.

Also among the many arguments that the Office Action simply failed to respond to was the argument above, noting that the case law cited by the Examiner is directed to changes in physical size (*i.e.* scaling), which are non-analogous to "size" changes in what the Examiner has called the field of "string manipulation for use with database operations." Thus, it should be taken as admitted that the Office Action was unable to provide any rationale for applying the case law to the facts in issue.

Finally, of course, this is not a situation in which a single reference discloses all of the features of any of the claims, with the single exception being a size, even if the number of labels were a “size” (not admitted). As the Office Action correctly noted, the cited case law is only applicable when “**only** a size ... is changing between the claimed invention and the prior art” (emphasis added). In this case, in addition to what the Office Action calls a size change, there is an additional change for which the Office Action was required to combine Shen and Kim, in order to attempt to hold the claims obvious. Thus, for this further reason, the rejection of claims 5-7 should be withdrawn.

With respect to this argument, the Office Action responded that the only difference between the combination of Shen and Kim is the additional alleged change in size. This argument does not respond to the issue raised above, namely that the case law is applicable to cases in which only a size is changing between the claimed invention and the prior art. The fact that a combination of references must first be made before the only difference is a difference in size is a conclusive rebuttal of the Office Action’s position. In other words, even if the only difference between the combination of Shen and Kim were the difference in size, the case law would not be applicable, because the difference in size would not be the only difference (the combination of the references being the other difference).

Moreover, it would not be obvious to combine Shen and Kim to produce what is claimed. The Office Action, at pages 3-4, stated that it would have been obvious to combine Shen and Kim because “a new idea that a telephone corresponds directly to an

IP address may be important and have a very high effective [sic] in the future Internet environment,” (error in Kim) citing and quoting from paragraphs [0005] and [0006] of Kim. This motivation, however, would not result in modifying Shen to provide what is claimed.

If the process of Kim were added to Shen, one of ordinary skill would do so by having the SCP generate the IP address automatically, rather than having to look up the IP address. However, otherwise Shen’s system would remain the same, and it would still not correspond to what is claimed.

The Office Action fails to address these distinctions, and accordingly is not fully responsive. The above-identified distinctions should, accordingly, be taken as admitted, and the rejection should be withdrawn.

Indeed, the combination of cited references would not relate to the improving of the performance of DNS name servers, with regard to which certain embodiments of the present application are related.

The Office Action argued that “nowhere in the claims are DNS servers mentioned.” Applicants note that the feature of enhancing the performance of DNS systems (which include DNS servers) is actually explicitly recited in each of claims 16-20. Accordingly, the Office Action’s argument should be reconsidered and withdrawn.

The Office Action also quoted the portion of Kim that relates to telephone terminals becoming miniaturized Internet hosts, but this does not have any apparent connection to either the subject matter of the claims, or the subject matter relied upon in

the rejection. Accordingly, it was unclear why this material is cited by the Office Action. In any event, however, this cited material does not support the rejection, because it does not motivation a combination that would correspond to what is claimed.

In the response to arguments, the Office Action clarified that the portion was cited simply to show that an IP address can correspond with a telephone number. That issue is not particularly germane to the claims, which do not recite such a feature.

At item 5 of the Office Action, claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Kim and further in view of U.S. Patent Application Publication No. 2003/0007482 of Khello et al. (“Khello”). The Office Action took the position that the combination of Shen and Kim discloses all of the features of claim 8 except “receiving data including another Internet domain name in the second format” and “converting the another Internet domain name received in the second format back to the first format.” The Office Action cited Khello to remedy these deficiencies of claim 8. Applicants respectfully traverse this rejection.

Shen and Kim and their deficiencies (whether taken singly or in combination) with respect to claim 1, upon which claim 8 depends, are discussed above. Applicants respectfully submit that Khello does not remedy the deficiencies of Kim, and therefore that the combination of Shen, Kim, Khello does not disclose or suggest all of the features of any of the presently pending claims.

Khello generally relates to a method and apparatus for resolving an entity identifier into an internet address using a domain name system (DNS) server and an

entity identifier portability database. As explained at paragraph [0055], Khello suggests that a user A may enter an E.164 telephone number for user B into his user equipment. The user equipment may then generate a query. After various processing in the network, a DNS server may access its mobile number portability database which includes B's telephone number, and forward a corresponding IP address along with B's telephone number back to A's user equipment. As Khello explains at the end of paragraph 0055, this whole process may be performed so that a game may be played between users A and B.

Khello, however, is silent as to the above-identified deficiencies of the combination of Shen and Kim with respect to claim 1. Accordingly, it is respectfully submitted that Khello does not remedy the deficiencies of the combination of Shen Kim, and thus that the combination of Shen, Kim, and Khello does not disclose or suggest all of the features of claim 8, and the rejection of claim 8 should be withdrawn.

Additionally, there is no motivation to combine Shen, Kim, and Khello to obtain the claimed invention. In Kim, the general idea is that a telephone number corresponds directly to an IP address. Therefore, Kim generally discloses a method of automatically generating IPv6 addresses using E.164 telephone numbers and of looking up an address assigned to an E.164 telephone number. The generation method, shown in FIG. 4 of Kim, involves converting each digit of an E.164 number to a 4-bit binary format and padding the resulting sequence to form a bit sequence comprising 64 bits. The look-up method, shown in Figures 6a to 7 of Kim, corresponds to a conventional DNS database

system, except that the method is based on the E.164 number instead of the domain name of the conventional system.

Khello, in contrast, discloses a mechanism for resolving an entity identifier, such as a telephone number, into an Internet address. The aim of Khello is to accommodate portability of entity identifiers without having to substantially modify or rework the DNS infrastructure or various established number portability schemes.

In each of the references the problem and solution disclosed are different from each other, and from that presented in the present application. The present application indicates that an objective of certain embodiments is to improve the performance of the present de-facto name servers. This can be accomplished by conditionally combining at least two successive labels of an Internet domain name or Fully Qualified Domain Name (FQDN) to be supplied to database operations. In other words, Applicants have identified that the nature of the conversion of E.164 numbers into the FQDNs, or the nature of any other similar conversions producing like FQDNs with plenty of short labels, can degrade the performance of the de-facto name servers, as explained at paragraph [0024] of the present specification.

The cited references are completely silent about such a problem, let alone any solution to such a problem. Therefore, the idea of using modified or converted FQDNs to improve the performance of the name servers is not known from the references; likewise, the problems identified by Applicants are not known in the references. Accordingly, there would be no motivation to combine references or otherwise modify the references

to address the problems identified by the Applicants, because there was no disclosure of the problems to so motivate a combination.

The Office Action asserted that the claims are also completely silent as to such a problem and that the claims do not recite a Fully Qualified Domain Name (FQDN). It should be noted, however, that the claims can address the problem without reciting the problem and that the claims can be worded broadly so as to include a Fully Qualified Domain Name (FQDN) without specifically reciting such a feature.

Indeed, the underlying problem that Shen is attempting to solve is that the establishment of a VoIP connection can be troublesome from the point of view of a subscriber, as can be seen from paragraph [0004] of Shen. To try to mitigate this problem, Shen uses an Intelligent Network (IN) to resolve the Internet address based on the subscriber number, whereby the subscriber can enter only the subscriber number of the called Internet terminal.

In the contrast, the idea in Kim is that a telephone number corresponds directly to an IP address. Therefore, Kim discloses a method automatically generating IPv6 addresses using E.164 telephone numbers and of looking up an address assigned to an E.164 telephone number. Khello, in turn, discloses a mechanism for resolving an entity identifier, such as a telephone number, into an Internet address. The aim is to accommodate portability of entity identifiers without having to substantially modify or rework the DNS infrastructure or various established number portability schemes. Thus,

as noted above, the problems and solutions of the various references are different from each other and different from those discussed in the present application.

The Office Action took the position that motivation to combine is provided in Khello's paragraph [0054]. Applicants respectfully disagree. Khello's paragraph [0054] is simply a reason to practice Khello's invention. It is not a reason to combine Khello with Kim, or Kim with Khello, or either of them with Shen. Accordingly, Applicants respectfully submit that the Office Action's proposed motivation to combine is – in fact – not a motivation to combine, but simply a motivation to practice Khello.

Thus, the rejection should also be withdrawn in view of a lack of motivation to combine the references. For all of the above reasons, it is respectfully requested that the rejection of claim 8 be withdrawn.

With respect to the lack of motivation to combine, the Office Action responded that the subject matter cited from each case deals with the subject matter “claimed in Applicant's invention” which the Office Action characterized as “string manipulation,” though the term “string manipulation” is not recited, for example, in the independent claims. Furthermore, as noted above, the enhancement of DNS was specifically recited in claims 16-20, a fact that the Office Action's comments overlook. If the Office Action's comments are the actual basis for the rejection, the rejection should not have been made at least with respect to claims 16-20. Additionally, the intended use of “Internet domain name service provisioning” has been introduced into the preambles of

each of the independent claims, which further clarifies that the claims are not merely directed to “string manipulation.”

As previously, noted, motivation to practice Khello’s invention is different from motivation to combine Khello’s teachings with the teachings of another reference. Those two kinds of motivation are not the same. The former is what makes Khello’s disclosure a “teaching” (*i.e.* “do this”) and the latter is what is necessary to provide a reason for one ordinary skill in the art to combine the references (*i.e.* “do this with that”). Thus, the Office Action’s position is respectfully traversed, and it is respectfully requested that the rejection of claim 8 be withdrawn.

The Office Action responded to this deficiency by arguing that both Khello is directed to establishing a communication session and Shen is trying to solve a problem with respect to the establishment of a connection with an Internet terminal. Of course, as noted above, the actual problems that each reference is directed to is much more specific. Further, the fact that a sufficiently generic description of the problems addressed by the respective references could have some overlap does not establish that it would have been obvious to “do this with that” as noted above, because the features of the references cannot be abstracted: the references must be considered as a whole.

There is additional reason that all of the present rejections should be withdrawn. Kim and Khello are not from the “same field of endeavor” as the present application. MPEP 2141.01(a)(I) states: “TO RELY ON A REFERENCE UNDER 35 U.S.C. 103, IT MUST BE ANALOGOUS PRIOR ART” (capital letters in original). Furthermore, the

same section continues, by explaining that “The examiner must determine what is “analogous prior art” for the purpose of analyzing the obviousness of the subject matter at issue. “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). *See also In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) (“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng’g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) (where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is relevant to the particular problem with which the inventor is involved).”

The Office Action, in the “Response to Arguments” section, appears to have correctly recognized this test, and asserted that “the claimed subject matter is directed towards string manipulation for use with database operation and that both Kim et al. and Khello et al. manipulate strings for use with database operations. This is the same field

of endeavor.” Applicants respectfully disagree with the Office Action’s characterization of the field of endeavor.

The field of the invention provided in the application is: “More specifically ... improving the performance of current de-facto DNS name servers,” according to the present application, at paragraph [0001]. As further explained at paragraph [0006] of the present application, “Current de-facto DNS servers are based on [BIND] implementation, where the database is based on a Red-Black binary tree. A drawback related to these servers is that their performance is not optimized for the ENUM system [and] the ... conversion of the telephone number into the FQDN degrades their performance.” The cited art is not related to this field of endeavor. The Office Action’s “field of endeavor” does not correspond with self-description of the field of the invention provided in the specification, nor with the self-descriptions of the fields of the inventions of the cited references. It appears to have been written so broadly in the Office Action, for the purpose of rejecting the claims, not because it is what the evidence would lead one of ordinary skill in the art to conclude.

Applicants respectfully submit that the Office Action does not provide a *prima facie* case of obviousness, because obviousness must be established by evidence, not bare assertion. Accordingly, it is respectfully requested that the rejection be withdrawn.

The Office Action responded, in essence, by asserting that the claims are directly merely to string manipulation, and that domain name servers are not mentioned in the

claims. The Office Action, however, clearly overlooked claims 16-20 in making such remarks.

Furthermore, even if the references were from the same field of endeavor (which has not been shown by evidence), that would not end the analysis. The mere fact that references are from “the same field of endeavor” is not, by itself, sufficient to motivate the combination of particular teachings of the references. Moreover, as explained in MPEP 2141.01(a)(V), when the technical solutions are radically different and inconsistent as they were in *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993), the references cannot fairly be said to be in the “same field of endeavor.” Here, the approaches of the various references are incompatible and inconsistent and therefore cannot be said to be from the same field of endeavor. Accordingly, for this additional reason, it is respectfully requested that the rejection be withdrawn.

In other words, even if the references can be roped into a single category by making up a broader category of field of invention that that described in the evidence, such as saying that they both relate to “databases in telecommunications” or “databases in the Internet,” (or the Office Action’s somewhat narrower field of “string manipulation for use with database operations”), nevertheless, that does not mean that they are truly in the same field of invention, if their solutions are radically different, as they are with respect to both Kim and Khello. In short, Kim and Khello manipulate strings for use with database operations in a radically different way from the way in which strings are

manipulated for use with database operations in the present application. Thus, even if the references can be nested into a single broad category, they cannot be fairly said to be from the “same field of endeavor.” Thus, it is respectfully requested that all of the rejections be withdrawn.

The Office Action failed to address this argument, and consequently, it should be taken as admitted. Thus, this argument also provides another reason that the rejection should be withdrawn.

In addition to the various reasons that the rejections should be withdrawn identified above, the features of Shen and Kim that are alleged to correspond to the recited “Internet domain name,” specifically Shen’s IP address and Kim’s E.164 phone number, can no longer so correspond – whether or not the distinctions above are persuasive. Specifically, each of the independent claims now recites that the “Internet domain name” includes a “hostname,” which is a feature that is not present in an IP address or an E.164 phone number. Thus, for this additional reason, the rejections – which all depend on the identified correspondence – should be withdrawn.

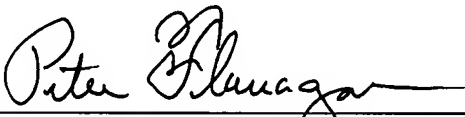
For the reasons explained above, it is respectfully submitted that each of claims 1-20 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-20 be allowed, and that this application be passed to issuance.

If – for any reason – the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, Applicant's undersigned attorney at the indicated telephone number to arrange
for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for
an appropriate extension of time. Any fees for such an extension together with any
additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Request for Continued Examination (RCE)
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